

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/IB2005/051012

International filing date (day/month/year)
24.03.2005

Priority date (day/month/year)
30.03.2004

International Patent Classification (IPC) or both national classification and IPC
G02F1/01, D03D15/00, D02G3/44

Applicant
KONINKLIJKE PHILIPS ELECTRONICS N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for International preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1b/s(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IB2005/051012

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. II Priority

1. ☒ The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43bis.1 and 64.1) is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/B2005/051012

Box No. V Reasoned statement under Rule 43bis.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-38
	No: Claims	
Inventive step (IS)	Yes: Claims	1-38
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-38
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rules 43bis.1 and 70.10)

and / or

2. Non-written disclosures (Rules 43bis.1 and 70.9)

see form 210

Cited Documents

- D1: US-A-6 096 666 (JACHIMOWICZ ET AL), 1 August 2000;
D2: EP-A-1 207 140 (LUCENT TECHNOLOGIES INC), 22 May 2002;
D3: US-A-5 906 004 (LEBBY ET AL), 25 May 1999.
D4: EP-A-1 482 352 (AGILENT TECHNOLOGIES INC), 1 December 2004.

Item V

- 1 The international application concerns an optical fibre the colour of which is electrically switchable; the optical fibre is suitable for inclusion in a fabric or garment.
- 2 Closest prior art D1 discloses in Figures 3 and 4 an optical fibre comprising
 - a) an elongated core having a core axis;
 - b) a substance having an electrically modulatable optical characteristic, covering a portion of the core; and
 - c) an electrical stimulation means adapted to produce an electric field arranged to electrically induce a change in the optical characteristic of the substance, thereby changing the visual appearance of the optical fibre.
- 3 Independent claim 1 furthermore defines that the electrical stimulation means is arranged such that the electric field extends in a direction substantially parallel to the core axis or in a direction extending substantially circumferentially about the core axis.

Independent claim 17 furthermore defines that the electrical stimulation means comprises a first and a second electrode pair disposed in the same off-axis plane and arranged such that the electric field extends in a direction substantially parallel to the core axis or in a direction extending substantially transversely to the core axis.

- 4 In D1, the electrodes are arranged such that the electric field is directed radially to the core axis. An electrode arrangement which provides an electric field directed parallel to the core axis or in a direction extending circumferentially about the core axis is not

disclosed in the available prior art.

Figure 5B of D2 discloses an electrical stimulation means comprising two pairs of electrodes which provide an electric field extending substantially transversely to the core axis. However, these electrode pairs are arranged on a circle around the core axis. An arrangement of two electrode pairs in the same off-axis plane is not suggested by the available prior art.

- 5 Therefore, the combination of features of claims 1 and 17 is neither known from nor suggested in the prior art and the subject-matter of claims 1 and 17 appears to be novel and inventive.
- 6 Dependent claims 2-16 and 18-38 are directed to advantageous embodiments of the devices of claims 1 and 17 and therefore are regarded as being novel and inventive either.
- 7 The industrial applicability of claims 1-38 is self-evident.
- 8 Independent claims 1 and 17 are not in the two-part form (Rule 6.3(b) PCT) based on document D1, and documents D1-D3 are not acknowledged in the description (Rule 5.1(a)(ii) PCT). Furthermore, reference signs to the Figures are missing in the claims (Rule 6.2(b) PCT).

Item VI

- 1 Document D4 could eventually become relevant in the European Phase.

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International application No.
PCT/IB2005/051012

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-38
	No: Claims	
Inventive step (IS)	Yes: Claims	1-38
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Industrial applicability (IA)	Yes: Claims	1-38
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2. Citations and explanations

see separate sheet

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